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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/655,929	09/06/2000	Garland Stephens	8224.002.NPUS00	8518
28694 7590 05/24/2010 NOVAK DRUCE + QUIGG LLP 1300 EYE STREET NW SUITE 1000 WEST TOWER WASHINGTON, DC 20005				
EXAMINER				
NGUYEN, NGA B				
ART UNIT		PAPER NUMBER		
3684				
MAIL DATE		DELIVERY MODE		
05/24/2010		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

09/655,929

**Applicant(s)**

STEPHENS ET AL.

**Examiner**

Nga B. Nguyen

**Art Unit**

3684

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 January 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 12 and 28-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12 and 28-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/02)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 7, 2010 has been entered.
2. Claims **12 and 28-30** are pending in this application.

### ***Response to Arguments/Amendment***

3. Applicant's arguments with respect to claims 12 and 28-30 have been fully considered but are moot in view of new ground of rejection.

### ***Claim Rejections - 35 USC § 101***

4. 35 U.S.C. 101 reads as follows:  
Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.
5. Claims 29 and 30 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 29 and 30 are rejected under 35 U.S.C. 101 because the claimed invention is directed to Functional Descriptive material per se (software per se). Data structures not claimed as embodied in computer-readable media are descriptive

material per se and are not statutory because they are not capable of causing functional change in the computer. See, e.g., Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory). Such claimed data structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention which permit the data structure's functionality to be realized. In contrast, a claimed computer-readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 12 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hausman et al (hereinafter Hausman), U.S. Patent No. 6,086,619, in view of May, U.S. Patent No. 6,317,727.

Regarding to claims 12 and 28, Hausman discloses a method for optimizing operation of a system of production, the method comprising:

in an electronic system comprising one or more processors and one or more memories, establishing via processor instruction, in the one or more memories a data structure corresponding to a graph having nodes (*column 2, lines 60-65, the general purpose computer that has been programmed using software called "NETCORE" to constitute an apparatus implementing the method; figures 16-23 and column 6, lines 40-67, a graph consists of a finite set of nodes and edges*);

a portion of the data structure corresponding to at least one edge (*figures 16-23 and column 6, lines 40-67, a graph consists of a finite set of nodes and edges*);

determining, via processor instruction, data corresponding to a linear combination of edges corresponding to a maximum notional amount for the graph (*column 7, lines 20-65, Netcore allows arbitrary groups of network elements to be defined and maximum, minimum or fixed values to be defined for the total value over those groups*).

Hausman does not disclose a method for determining a set of structured cash flow for exchanges comprising: nodes corresponding to a collection of at least partial exchange definitions/cash flow definitions including at least one partial swap definition, and edge between exchange definitions/cash flow definitions having at least partially compatibles terms including at least one of: an underlying, a start date, an end date, and a variance. However, May discloses a method for determining a set of structured cash flow for exchanges comprising: a collection of at least partial exchange definitions/cash flow definitions including at least one partial swap definition, and exchange definitions/cash flow definitions having at least partially compatibles terms

including *at least one of*: an underlying, a start date, an end date, and a variance (*column 18, lines 3-40, column 20, lines 5-65, swap transactions; column 20, lines 35-55, an underlying, start date, end date; column 20, line 65-column 21, line 10, and example of an order*). Note that the claimed invention described nothing more than constructing a graph contains nodes and edges and applying specific financial data (exchange definitions/cash flow definitions for nodes, compatible terms for edges) into the graph. Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify Hausman's to apply the exchange definitions/cash flow definitions and the compatible terms as taught by May, into Hausman's nodes and edges, for the purpose of enhancing the method for determining a set of structured cash flow for the exchanges.

8. Claims 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hausman et al (hereinafter Hausman), U.S. Patent No. 6,086,619, in view of Young et al (hereinafter Young), U.S. Patent No. 6,393,409.

Regarding to claims 29 and 30, Hausman discloses a software product comprising: digital information storage media; and processor instructions, residing on the media, and operable, when executed by at least one processor, to determine a linear combination of structured data having a net present value of substantially zero and corresponding to maximum flow/minimum cut for a graph having at least one node (*column 2, lines 60-65, the general purpose computer that has been programmed using software called "NETCORE" to constitute an apparatus implementing the method; figures 16-23 and column 6, lines 40-67, a graph consists of a finite set of nodes and*

*edges; column 7, lines 20-65, Netcore allows arbitrary groups of network elements to be defined and maximum, minimum or fixed values to be defined for the total value over those groups).*

Hausman does not disclose cash flow exchange having a net present value of substantially zero and having at least one node corresponding to at least one swap. However, John discloses cash flow exchange having a net present value of substantially zero and at least one swap transaction (*column 7, lines 1-25, swap transaction; column 8, lines 5-15, the amounts bought and sold over all participating firms must net to zero*). Note that the claimed invention described nothing more than constructing a graph contains nodes and applying specific financial data (swap transaction for nodes) into the graph. Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify Hausman's to apply the swap transactions as taught by John into Hausman's nodes, for the purpose of enhancing the method for determining a set of structured cash flow for the exchanges.

### ***Conclusion***

9. Claims **12 and 28-30** are rejected.
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Nga B. Nguyen whose telephone number is (571) 272-6796. The examiner can normally be reached on Monday-Thursday from 9:00AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kambiz Abdi can be reached on (571) 272-6702.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-3600.

11. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks  
P.O. Box 1450  
Alexandria, VA 22313-1450

Or faxed to:

(571) 273-8300 (for formal communication intended for entry),

or

(571) 273-6796 (for informal or draft communication, please label

"PROPOSED" or "DRAFT").

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a



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USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nga B. Nguyen/

Primary Examiner, Art Unit 3684

May 20, 2010